REMARKS

Reconsideration of the Office action mailed on December 23, 2004 is requested in view of the foregoing amendments and the following remarks.

Finality of Rejection

The summary of the Office Action indicated the action was non-final but paragraph 18 of the Office Action indicated the action was final. Applicants request clarification. Applicants point out that the action should not be final because the Examiner introduced a new ground of rejection that was neither necessitated by an amendment nor based on recently submitted information. Specifically, claims 1 and 19 were rejected as obvious in light of U.S. Patent No. 4,117,752 to Yoneda combined with U.S. Patent No. 4,653,189 to Andreasson and U.S. Patent No. 3,858,095 to Friemann. That was a new ground of rejection. Those claims were previously rejected as obvious in light of U.S. Patent No. 4,653,189 to Andreasson combined with U.S. Patent No. 3,858,095 to Friemann 3,785,230, but that rejection was withdrawn. Neither claim 1 nor 19 had been amended when the new rejection based on Yoneda was made and Yoneda had been disclosed previously. The Examiner recognized that there was a new ground of rejection by stating that applicant's prior arguments had been considered but were "moot in view of the new ground(s) of rejection." (Office action, 17.) Accordingly, the rejection should not be final. MPEP 706.07(a).

Special Circumstances

The Examiner asked applicant to point out any material information from co-pending applications listed as parents to the instant application if the criteria for materiality applies and if the examination record provides reason for applicant to believe

that the Examiner has not considered such information. Applicant has previously identified applications and believes that identification satisfies the duty of disclosure. Applicant is also attaching an updated list of applications and patents to this document. The Examiner is requested to inform applicant if further information is needed.

Claim Rejections – 35 U.S.C. 103

Claims 1 and 19 stand rejected under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,117,752 to Yoneda combined with U.S. Patent No. 4,653,189 to Andreasson and U.S. Patent No. 3,858,095 to Friemann. That rejection is traversed.

Claim 1 describes a woodworking machine with a cutting tool, a detection system adapted to detect a dangerous condition between a person and the cutting tool, and a brake component adapted to engage the cutting tool, where the brake component has a ready position spaced apart from the cutting tool. The machine further includes "an actuator having stored energy sufficient to move the brake component from the ready position into engagement with the cutting tool within approximately 3 milliseconds or less after the dangerous condition is detected."

Yoneda discloses a system for stopping a band blade of a cutting apparatus when a person contacts the blade. The apparatus includes a band blade looped around several pulleys. (Yoneda, Fig. 1.) A motor drives one of the pulleys to move the cutter and a user slides a workpiece past the moving cutter to cut the workpiece. If a user touches the blade, then an electromagnetic clamp brake clamps the sides of the blade and another electromagnetic brake grips a plate integral with one of the pulleys. (Yoneda, column 2, lines 34-41.)

The Examiner says Yoneda discloses the invention substantially as claimed, but fails to disclose an actuator capable of moving a brake component into engagement with a cutting tool within approximately 3 milliseconds. The Examiner cites Friemann to show a brake actuated within 5 milliseconds and then says it would have been obvious to use 3 milliseconds instead of 5 milliseconds "because it has been held that discovering an optimum value of a result-effective variable involves only routine skill in the art." (Office action, 14.)

The 3 millisecond limitation, however, is not simply a result-effectlve variable that can be adopted through application of routine skill in the art. Rather, the 3 millisecond limitation is a specific characteristic of the recited actuator that has heretofore never been achieved in a woodworking machine, as far as applicant is aware. None of the actuators or systems disclosed in the cited references could be optimized to meet that limitation.

Friemann, in fact, does not even enable a brake actuated within 5 milliseconds. Applicant submitted in a co-pending application a declaration of Dr. David A. Turcic, an associate professor of mechanical engineering at Portland State University in Portland, Oregon. In that declaration Dr. Turcic explained that the Friemann reference does not disclose a brake capable of actuating within 5 milliseconds. Generally, Dr. Turcic explains that Friemann fails to disclose a brake capable of actuating within 5 milliseconds because Friemann's system uses relays and relays cannot act that fast and because Friemann's system uses motor and electromechanical brakes and those brakes cannot act that fast due to inertia. A copy of Dr. Turcic's declaration is attached and incorporated herein by reference. Applicant is submitting that declaration in the

present application to show that Friemann fails to disclose any actuator as set forth in claim 1, and therefore, claim 1 is not obvious in light of Yoneda and Friemann. MPEP 2143.03 (all claim limitations must be taught or suggested by the cited references).

But even if Friemann disclosed a brake actuated within 5 milliseconds, which it does not, an actuator as required by claim 1 still would not have been obvious because, as stated, the 3 millisecond limitation is more than a result-effective variable having an optimum value. Applicant understands the general policy behind rejections based on result-effective variables, such as when determining a suitable temperature within a disclosed temperature range or an optimum concentration within disclosed limits. But the 3 millisecond limitation set forth in claim 1 is not something to be optimized to achieve a recognized result. To the contrary, the 3 millisecond limitation is a specific characteristic of the recited actuator and none of the actuators or systems disclosed in the cited references could be optimized to meet that limitation. In fact, none of the references even discuss such a limitation. Therefore, the 3 millisecond limitation is not simply a result-effective variable. MPEP 2144.05(II)(B).

Applicant also points out that Yoneda does not disclose an actuator having stored energy. The clamp brake in Yondea is actuated by energizing a wire winding 20' and the other brake in Yoneda is actuated by energizing a wire winding BR. (Yoneda, column 3, lines 1-5.) Those windings are energized by power supply 8 when relay contacts 5 are closed. Those two windings do not store energy; rather, electric current must flow through the windings to create the electromagnetic force used to operate the brakes. Moreover, Yoneda does not disclose a capacitor to power the brakes. The only capacitors disclosed by Yoneda are capacitors CP_1, CP_2 and CP_3. Capacitor CP_1 is a

smoothing capacitor connected between outputs of an amplifier A to filter electrical noise. (Yoneda, column 2, lines 58-59.) Capacitor CP_2 is a capacitor connected between terminals in transformer Tr and to the negative terminal 3' of amplifier A. (Yoneda, column 2, lines 62-65.) Capacitor CP_3 is another smoothing capacitor. (Yoneda, column 3, line 3.) Thus, Yoneda fails to disclose an actuator as set forth in applicant's claim 1.

The Examiner alternatively said that if Yoneda lacks the stored energy capacitor, then "Andreasson discloses that it is old and well known in the art to use stored energy braking mechanisms, that is, electromechanical brakes with charged capacitors." (Office action, 14.) But even if electromechanical brakes as disclosed in Yoneda are triggered by capacitors as disclosed in Andreasson, the combination still would not constitute an actuator having stored energy sufficient to move a brake component into engagement with a cutting tool within 3 milliseconds as required by applicant's claim 1. That is because brakes like those used in the cited references have inertia that must be overcome and coils that must be energized before anything moves into engagement with the cutting tool, and charging coils and overcoming inertia each requires more than 3 milliseconds. This is explained in the attached declaration of Dr. David A. Turcic where he discusses the operation of motor brakes and electromechanical brakes. Thus, even if the devices disclosed in Yoneda or Friemann were combined with the capacitors disclosed in Andreasson, there still would not be an actuator as set forth in applicant's claim 1.

Claim 19 describes a woodworking machine having a cutting tool, means for detecting a dangerous condition between a person and the cutting tool, a brake

component spaced apart from the cutting tool, and "means for moving the brake component into contact with the cutting tool within 3 milliseconds or less after the dangerous condition is detected." The "means for moving" limitation is a means-plus-function limitation that must be interpreted to cover the corresponding structure, material or acts described in the specification and equivalents thereof. 35 U.S.C 112 (6th paragraph). None of the cited references discloses the structure, material or acts set forth in the specification or equivalents thereof, for the reasons set forth above concerning claim 1, and therefore claim 19 is not obvious in light of the cited references.

Claims 3 and 4 stand rejected under 35 U.S.C. 103(a) as obvious over Yoneda combined with Andreasson and Friemann as described above, and further in view of U.S. Patent No. 3,695,116 to Baur and U.S. Patent No. 5,606,889 to Bielinski. That rejection is traversed. First, claims 3 and 4 depend from claim 1 and are not obvious for the same reasons claim 1 is not obvious. Claims 3 and 4 also include additional limitations that distinguish the cited references. For example, claim 3 requires "a spring adapted to move the brake component into engagement with the cutting tool," and claim 4 requires "a housing removably coupled to the frame, where the spring and the brake component are mounted within the housing." Neither Baur nor Bielinski discloses a spring adapted to move a brake component into engagement with a cutting tool, or a spring and brake component mounted within a removable housing.

Claim 19 was rejected under 35 U.S.C. 103(a) as obvious over Yoneda combined with Friemann. That rejection is traversed for the reasons set forth above.

Double Patenting

The Examiner made several double patenting rejections, each of which is addressed below.

1. Application Number 10/215,929 in view of Friemann.

The Examiner provisionally rejected claims 1, 3, 4 and 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1, 2, 4-8 and 14-18 from application number 10/215,929 in view of Friemann (U.S. Patent No. 3,858,095). This rejection is traversed but is now moot because the cited application has gone abandoned.

2. Application Number 09/929,240 in view of Friemann.

The Examiner provisionally rejected claims 1, 3, 4 and 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 21-28 from application number 09/929,240 in view of Friemann. This rejection is traversed. First, applicant points out that co-pending claims 22-24, 27 and 28 have been cancelled without prejudice so the rejection based on those claims is moot. There remains co-pending claims 21, 25 and 26.

Claims 1, 3 and 4 in the present application all require "an actuator having stored energy." None of the cited co-pending claims disclose an actuator having stored energy. Friemann also fails to disclose an actuator having stored energy. Therefore, claims 1, 3 and 4 are not obvious in light of the co-pending claims combined with Friemann. MPEP 2143.03 (all claim limitations must be taught or suggested).

Claims 1, 3 and 4 also require "an actuator having stored energy sufficient to move the brake component from the ready position into engagement with the cutting

tool within approximately 3 milliseconds or less after contact between a person and the cutting tool is detected." None of the cited co-pending claims disclose this limitation. The Examiner says it would have been obvious to make a woodworking machine with this limitation because Friemann says it can stop a band cutter within 5 milliseconds. However, as explained above, Friemann does not disclose a brake actuated within 5 milliseconds, and even if it did, the 3 millisecond limitation is not simply a result-effective variable, as explained above. Claims 3 and 4 require additional limitations that further distinguish the cited claims, for example, a spring and housing.

3. Application Number 10/146,527 in view of Friemann.

The Examiner provisionally rejected claim 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1 and 2 from application number 10/146,527 in view of Friemann. This rejection is traversed. Claim 19 requires "a brake component spaced apart from the cutting tool; and means for moving the brake component into contact with the cutting tool within 3 milliseconds or less after the dangerous condition is detected." Co-pending claims 1 and 2 do not disclose those limitations, and Friemann does not disclose the 3 millisecond limitation, as explained. Therefore, this double patenting rejection should be withdrawn.

Applicant also traverses this rejection because a two-way test for obviousness should have been applied. Section 804(II)(B)(1)(b) from the MPEP explains:

> [W]here, through no fault of the applicant, the claims in a later filed application issue first, an obvious-type double patenting rejection is improper, in the absence of a two-way obviousness determination, because the applicant does not have complete control over the rate of progress of a patent application through the Office.

This rule is taken from the case of In re Braat, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991). In that case, the Board of Patent Appeals and Interferences affirmed an obviousness-type double patenting rejection of an earlier-filed application in view of a commonly-assigned but later-filed patent. Both the application and the patent concerned optical record carriers such as CDs. The Board applied a one-way test for obviousness and determined that the claims at issue from the earlier-filed application were obvious in light of claims from the later-filed patent. The Federal Circuit reversed and explained that a two-way test should have been applied because the two applications could not have been filed together as one, because it was not applicant's fault that the later-filed application issued first, and because the later-filed claims were not obvious in light of the earlier-filed claims. Id. at 594, 19 USPQ2d at 1293. The court explained that the rationale behind the application of the two-way test "is that an applicant (or applicants), who files applications for basic and improvement patents should not be penalized by the rate of progress of the applications through the PTO, a matter over which the applicant does not have complete control." Id. at 593, 19 USPQ2d at 1292 (citing 3 D. Chisum, *Patents*, §9.03[2][c] (1990), and the following cases: In re Borah, 345 F.2d 1009, 148 USPQ 213 (CCPA 1966), In re Stanley, 214 F.2d 151, 102 USPQ 234 (CCPA 1954), In re Calvert, 97 F.2d 638, 38 USPQ 184 (CCPA 1938), Thomson-Houston Elec. Co. v. Elmira & Horseheads Ry. Co., 71 F. 396 (2d Cir.), *cert. denied* 163 U.S. 685, 16 S.Ct. 1201, 41 L.Ed.2d 315 (1896), Thomson-Houston Elec. Co. v. Ohio Brass Co., 80 F. 712 (6th Cir. 1897)).

The case of In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998), further explains when a two-way test applies. In Berg, the Federal Circuit affirmed a

one-way double patenting rejection of genus claims in light of nearly identical species claims. The claims concerned a method of preparing abrasive particles for use as an abrasive grit. The genus and species claims were the subject of two separate applications filed the same day. The species claims issued first and the Patent Office applied a one-way test to reject the genus claims in light of the species claims. The court affirmed the double patenting rejection and the application of the one-way test because Berg could have filed all the claims in a single application but instead chose to file two separate applications on the same day. Id. at 1433, 46 USPQ2d at 1230.

Even though Berg affirmed the application of the one-way test, the court recognized that the two-way test applies when a later-filed improvement patent issues before an earlier-filed basic invention. Specifically, the court distinguished Braat by saying: "*Braat* ... emphasized the more typical scenario in which, despite common inventive entities, the two-way test applied: 'when a later-filed improvement patent issues before an earlier filed basic invention.'" Id. at 1434, 46 USPQ2d at 1230 (quoting In re Braat, 937 F.2d at 593, 19 USPQ2d at 1292, emphasis added in Berg). The court in Berg also said the "essential concern" behind the two-way test "was to prevent rejections for obviousness-type double patenting when the applicants filed first for a basic invention and later for an improvement, but, through no fault of the applicants, the PTO decided the applications in reverse order of filing, rejecting the basic application although it would have been allowed if the applications had been decided in the order of their filing." Id. at 1432, 46 USPQ2d at 1229.

The situation in the present application is similar to the situation in Braat and the situation described in Berg, and therefore, the two-way test for obviousness should

apply. The present application was filed before the cited application and the cited application could not have been filed with the present application because it includes additional disclosure of later-developed material. Also, the cited claims from the later-filed application are not obvious in light of the earlier-filed claims.

It may be that claims in a later-filed application issue before claims in an earlier-filed application simply because more time is required to determine the patentability of the earlier-filed claims. Any such delay, however, is not applicant's fault; rather, it is simply the result of the administrative process. The Federal Circuit recognized in Braat, 937 F.2d at 593, 19 USPQ2d at 1292, that applicant "should not be penalized by the rate of progress of the applications through the PTO," and therefore, any delay resulting from the administrative process is properly credited to the Patent Office and does not prevent the application of the two-way test.

For all these reasons, a two-way obviousness test should be applied. Under that test, the present double patenting rejection is improper and should be withdrawn because the cited claims include limitations that distinguish and are not obvious over claim 19 in the present application.

Applicant also points out that the policy behind an obviousness-type double patenting rejection is "to prevent an unjustified extension of the term of the right to exclude granted by a patent by allowing a second patent claiming an obvious variant of the same invention to issue to the same owner later." In re Berg, 140 F.3d at 1431-1432, 46 USPQ2d at 1229. This is not a concern in the present application because patent term is now measured from the filing date rather than the issue date. 35 USC 154(a)(2).

Applicant further points out that this double patenting rejection of earlier-filed claims is inconsistent with the practice of filing continuation-in-part applications. The rejection, if correct, would mean that a subsequent invention comprising A, B and C could be the basis for a double patenting rejection of a previous invention comprising only A and B even though the subsequent invention could not have been included in the prior application because it had not yet been invented and even though the claims to the subsequent invention could not be added to the earlier application because those claims would constitute new matter. The result would be to unfairly limit the ability of an inventor to file applications on subsequent inventions, which is contrary to the ruling of Braat discussed above.

This double patenting rejection also results in unequal treatment under the patent laws. Specifically, this double patenting rejection prevents applicant from receiving separate patents to genus and species inventions simply because one application includes claims that dominate claims in the other application, even though others could obtain separate patents. For example, if a third party invented the machine described in the cited claims instead of applicant, then both applicant and the third party could patent their respective inventions without receiving a double patenting rejection even though the claims to the genus would dominate the claims to the species. If unrelated parties can file separate applications to genus and species claims without invoking a double patenting rejection, then a single party should be able to do likewise.

Additionally, the cited co-pending claims include limitations not found in claim 19 of the present application and those limitations result in claims that define an invention patentably distinct from the claims in the present application. See General Foods Corp.

v. Studiengesellschaft Kohle mbH, 23 USPQ2d 1839, 1843 (Fed. Cir. 1992) ("Anything less than a process with all 9 steps is not what is claimed, and is, therefore, not patented."); In re Stanley and Lowe, 102 USPQ 234, 240 (CCPA 1954) (appealed claims were distinguishable from improvement claims because the improvement claims included additional limitations).

4. Application Number 09/929,237 in view of Friemann.

The Examiner provisionally rejected claim 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1-9, 11 and 28-30 from application number 09/929,237 in view of Friemann. This rejection is traversed. Claim 19 requires "a brake component spaced apart from the cutting tool; and means for moving the brake component into contact with the cutting tool within 3 milliseconds or less after the dangerous condition is detected." The cited co-pending claims do not disclose those limitations, and Friemann does not disclose the 3 millisecond limitation, as explained. Therefore, this double patenting rejection should be withdrawn.

5. Application Number 09/929,236 in view of Friemann.

The Examiner provisionally rejected claims 1, 3, 4 and 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1, 2, 6, 7, 10, 11 and 20-27 from application number 09/929,236 in view of Friemann. This rejection is traversed because none of the cited co-pending claims disclose an actuator or means for moving as required by claims 1, 3, 4 and 19, respectively. Also, Friemann fails to disclose the 3 millisecond limitations, as explained. For these reasons, this double patenting rejection should be withdrawn.

6. Application Number 09/929,241 in view of Yoneda and Friemann.

The Examiner provisionally rejected claims 1, 3, 4 and 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1-8 from application number 09/929,241 in view of Yoneda and Friemann. This rejection is traversed because none of the cited co-pending claims disclose an actuator or means for moving as required by claims 1, 3, 4 and 19, respectively. Also, Friemann fails to disclose the 3 millisecond limitations, as explained. For these reasons, this double patenting rejection should be withdrawn.

7. Application Number 10/100,211 in view of Friemann.

The Examiner provisionally rejected claim 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1, 17 and 19-28 from application number 10/100,211 in view of Friemann. First, co-pending claims 20 and 28 have been cancelled without prejudice so the rejection based on those claims is moot. The rejection based on the remaining claims is traversed because none of the cited co-pending claims disclose an actuator or means for moving as required by claims 1, 3, 4 and 19, respectively. Also, Friemann fails to disclose the 3 millisecond limitations, as explained. For these reasons, this double patenting rejection should be withdrawn.

8. Application Number 10/643,296.

The Examiner provisionally rejected claims 1, 3, 4 and 19 under the judicially created doctrine of obviousness-type double patenting in light of claims 1-10 from application number 10/643,296. This rejection is traversed for the same reasons explained above in section 3.

Withdrawn Claims

Applicant requests that the withdrawn claims be reinstated because they depend from claims that should be allowable.

New Claim

Applicant is adding new claim 31. That claim distinguishes the cited references by requiring "an actuator having stored energy sufficient to start moving [a] moveable component within 3 milliseconds after the dangerous condition is detected." Energy may be stored mechanically, for example in a spring, or chemically, for example in an explosive, or the energy may be stored in some other way. The moveable component may be a brake that engages the cutting tool, a component to retract the cutting tool, or some other component.

Conclusion

Applicant submits that all of the issues raised in the Office action mailed December 23, 2004 have been addressed and overcome, and therefore, the application should be allowed.

Respectfully submitted,

SD3, LLC

David A. Fanning, Esq.
Registration No. 33,233
Customer No. 27630
22409 S.W. Newland Road
Wilsonville, Oregon 97070
Telephone: (503) 638-6201
Facsimile: (503) 638-8601